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RESEARCH INTERESTS	Randomized algorithms, data mining, databases, statistical and computational learning theory	
EDUCATION	Brown University , Providence, Rhode Island USA Ph.D. Candidate, Computer Science, <i>In Progress since Sept. 2009. Expected Completion: May 2014.</i> M.S., Computer Science, May 2010 <ul style="list-style-type: none">• Dissertation Topic: Randomized algorithms for data mining and database management• Advisor: Prof. Eli Upfal Università di Padova , Padua, Italy Laurea Magistrale (M.S.) <i>cum laude</i> , Computer Engineering, July 2009 Laurea (B.S.), Information Engineering, July 2007 <ul style="list-style-type: none">• Master Thesis Topic: Top-K Frequent Itemsets Mining through Sampling	
CURRENT RESEARCH	Mining of interesting patterns through sampling <ul style="list-style-type: none">• Development of data mining algorithms providing high-quality approximations of the collection of interesting patterns with probabilistic guarantees by only analyzing a random sample of the dataset. Different measures of interestingness are considered. Predictive database management system prototype <ul style="list-style-type: none">• Development of a data management technology that would simplify building predictive analytics applications over large-scale data. The concrete product of the project will be a new type of database system, called Longview, that seamlessly integrates predictive models as first-class primitives by incorporating them in the process of data management and query optimization. Algorithms for MapReduce <ul style="list-style-type: none">• Working with colleagues from Università di Padova, Italy, we are developing a realistic computational model and algorithms for the MapReduce distributed/parallel architecture. Problems of interests include matrix operations, clustering, and computation of graph properties.	
PUBLICATIONS	<p>M. Riondato, J. DeBrabant, R. Fonseca, and E. Upfal. PARMA: A parallel randomized algorithm for association rules mining in MapReduce. To appear in CIKM 2012.</p> <p>M. Riondato and E. Upfal. Efficient discovery of association rules and frequent itemsets through sampling with tight performance guarantees. To appear in ECML-PKDD 2012. Full version: <i>CoRR</i>, abs/1111.6937, available from http://arxiv.org/abs/1111.6937, 2012.</p> <p>A. Pietracaprina, G. Pucci, M. Riondato, F. Silvestri, and E. Upfal. Space-round tradeoffs for MapReduce computations. In <i>Proceedings of the 26th International Conference on Supercomputing, ICS 2012, June 25-29, 2012, San Servolo Island, Venice, Italy, 2012</i>.</p> <p>M. Akdere, U. Çetintemel, M. Riondato, E. Upfal, and S. B. Zdonik. Learning-based query performance modeling and prediction. In <i>Proceedings of the 28th International Conference on Data Engineering, ICDE 2012, April 1-5, 2012, Washington, DC, USA, 2012</i>.</p> <p>M. Riondato, M. Akdere, U. Çetintemel, S. B. Zdonik, and E. Upfal. The VC-dimension of SQL queries and selectivity estimation through sampling. In D. Gunopulos, T. Hofmann, D. Malerba, and M. Vazirgiannis, editors, <i>Machine Learning and Knowledge Discovery in Databases - European Conference, ECML PKDD 2011, Athens, Greece, September 5-9, 2011, Proceedings, Part II</i>, volume 6912 of <i>Lecture Notes in Computer Science</i>, pages 661–676. Springer, 2011.</p> <p>M. Akdere, U. Çetintemel, M. Riondato, E. Upfal, and S. B. Zdonik. The case for predictive database systems: Opportunities and challenges. In <i>CIDR 2011, Fifth Biennial Conference on Innovative Data Systems Research, Asilomar, CA, USA, January 9-12, 2011, Online Proceedings</i>, pages 167–174. www.crdrrdb.org, 2011.</p> <p>A. Pietracaprina, M. Riondato, E. Upfal, and F. Vandin. Mining top-K frequent itemsets through progressive sampling. <i>Data Mining and Knowledge Discovery</i>, 21(2):310–326, 2010.</p> <p>M. Riondato. Jails, Chapter 16. In <i>The FreeBSD Handbook</i>, http://www.freebsd.org/handbook.</p>	

INVITED TALKS	M. Riondato. Approximate aggregate database queries through sampling. <i>Invited Lecture for CSCI-2950-T, Brown University</i> , October 2011.
	M. Riondato. Graphs algorithms in MapReduce: design choices and optimizations. <i>Invited Lecture for CSCI-2950-U, Brown University</i> , September 2011.
	M. Riondato. Statistical Learning Theory meets Databases. <i>Advanced Computing Group Talk, Department of Information Engineering, University of Padua, Italy</i> , June 2011.
OTHER ACADEMIC EXPERIENCE	<p>Sapienza Università di Roma, Rome, Italy <i>Visiting Ph.D. Student</i>, June – July 2011</p> <ul style="list-style-type: none"> Worked with Prof. S. Leonardi, A. Anagnostopoulos, and L. Becchetti on algorithms for a model of crowdsourcing computation, and on algorithms for MapReduce. <p>Università di Padova, Padua, Italy <i>Research Fellow</i> May – July 2011</p> <ul style="list-style-type: none"> Worked with Prof. A. Pietracaprina, G. Pucci, and F. Silvestri on "The Map-Reduce Paradigm: computational model and algorithms". Funded by MIUR of Italy under Project AlgoDEEP prot. 2008TFBWL4. <p>Chalmers University of Technology, Gothenburg, Sweden <i>Visiting Ph.D. Student</i> August 2010</p> <ul style="list-style-type: none"> Worked with Prof. Devdatt Dubhashi and helped organizing a seminar on Probability and Computing. <p>Brown University, Providence, Rhode Island, USA <i>Visiting Grad Student</i> October 2008 – June 2009</p> <ul style="list-style-type: none"> Worked with Prof. Eli Upfal on master thesis <i>Top-K Frequent Itemsets Mining through Sampling</i>.
TEACHING EXPERIENCE	<p>Brown University, Providence, Rhode Island, USA</p> <ul style="list-style-type: none"> Teaching Assistant, Probability and Computing, Spring 2012 Teaching Assistant, Probabilistic Methods in Computer Science, Fall 2010
PROFESSIONAL SERVICE	<p>Brown University Graduate Student Council <i>President</i> April 2011 – Present day</p> <ul style="list-style-type: none"> Represented the interests of the entire graduate student community (approx. 2000 students) with the university administration and the broader community at all levels. Previously held positions include VicePresident (Jan – April 2011) and representative for the Computer Science Department (Sep 2009 – April 2011). <p>Brown Computer Science Theory Lunch <i>Organizer</i> January – December 2010</p> <ul style="list-style-type: none"> Responsible for organizing the weekly meeting of the Theory Group. Duties including finding speakers, both external and internal to the department, and volunteers for bringing lunch. <p>The FreeBSD Project <i>src Committer</i> January 2006 – Present day</p> <ul style="list-style-type: none"> Developer with write access on the main source repository. Worked on FreeSBIE, a Live-CD distribution of the FreeBSD operating system. Release Engineer for FreeSBIE 2.X. Also worked on handling and solving bug reports of various nature.
CITIZENSHIP	Italy
UPDATED	July 17, 2012